

## Book review

# Complexity and healthcare organization: a view from the street

*Edited by David Kernick  
Radcliffe Medical Press Ltd, 2004, 28 chapters, pp. 370  
(incl. appendix and references),  
ISBN 1 85775 814 5*

Patients who decide to seek professional help expect to be well looked after so as to be able to continue with their normal activities as soon as possible. An expectation that ultimately depends on a well functioning health care system; one that is accessible at the time of need, that provides well trained staff with good technical and interpersonal skills, and that has the ability to coordinate and integrate patients' care needs. For this to work, the system needs to be adequately resourced and resources have to be effectively spread between the various domains of public, preventive, and supportive/curative care. Most of the time the system works all right, but when things go wrong, fingers point in many different directions. Answers for failure are hard to come by and ultimately the blame is placed on the "system". This book uses the framework of a "complex adaptive system" to de-mystify the dys/function of the health system.

The 28 short essays are presented in seven sections, each preceded by an introduction, which makes the book readily accessible. Almost all of the authors work within the NHS in Britain and they examine and reflect on experiences within this unique system. In part, this is a strength of the book. However, those less familiar with the history and intricacies of the NHS might find some chapters difficult to follow.

Section one provides an introduction to systems and complexity. Unfortunately, the attempt to provide a brief and succinct (rather than a detailed) overview of system and complexity theory makes this section difficult for the novice and superficial for those who understand the issues.

Section two deals with the spectrum of how we think about organizations. These essays introduce the various operational concepts of system approaches, such as cognitive maps, qualitative system dynamics or qualitative politicized influence diagrams. These operational concepts are then conceptually expanded to thinking about organizations as "learning systems", thereby challenging the belief that organizations can be engineered and controlled. Instead, leadership in

learning organizations operates on the basis that understanding the interactions between its people is the vehicle to success.

Section three "Complexity perspectives on healthcare organization" sets the scene for the rest of the book. Healthcare systems are explored through the concept of *complex adaptive systems*. The centre of the system is the patient-healthcare professional and his relationships with all other parts of the system. In this system "leadership is seen as the management of meaning and symbolic action and the articulation of the organizational vision". This vision is best implemented by offering simple rules. In the context of the NHS, suggested rules could be "be innovative, take risks and foster innovation, develop new ways of working, learn from failure, change needs to be bottom-up, or reflect local needs".

The next section "Facilitating emergence in healthcare organizations" pulls the themes of the previous two chapters together by describing the experiences of applying system approaches to a variety of contexts. The examples illustrate a model for the decision-making process for the evaluation of new technologies: a practice-based exercise of harnessing the power of qualitative politicized influence diagrams to improve patient access and continuity of care in a large medical practice; the use of computer-based modelling of patient flows through an emergency department that takes into account the community needs and hospital capacity to deal with the demand; and the use of visual and performing arts to stimulate sense-making work within an organization.

The final three sections are thought provoking as they describe how the concept of complex adaptive systems can/could be used to address a range of wider issues impacting clinical patient care. The issues explored include, amongst others: clinical governance, social networks and social capital, medical education, community regeneration, building a house for independent living with disabilities, managing hospital bed allocation, and delivering a culturally sensitive community heart health promotion programme for South Asians. All examples illustrate how the solutions EVOLVED through the involvement of all stakeholders and their understanding of the problem and their views on what outcome should be achieved.

The book makes a compelling argument that health-care organizations are complex adaptive systems. “Making sense” of the context of a problem encountered is the most important step in solving it. This strategy stands in stark contrast to the current preferred practice of imposing preconceived simple hierarchical solutions that have shown themselves to fail most of the time. The examples from the many diverse parts of a healthcare organization allow the reader to see the practical applicability of systems and complexity theory to solving everyday problems encountered at the workplace.

“Complexity and healthcare organization—a view from the street” is a good read. It is stimulating as it provokes debate and expands horizons; there are no prescriptive solutions based on organizational theories. The most enlightening chapters are those that link theoretical considerations with real-life experiences. I would recommend this book to those who feel frustrated with the limitations of the reductionist approach to complex problems and are looking for

inspiring alternative approaches. You may not necessarily understand everything there is to know about systems and complexity, but you will be stimulated to do more reading and to discuss and promote holistic thinking and acting within your own sphere of influence. I agree with the author David Kernick’s sentiment “Perhaps this book is just a bricoleur’s rag bag” (bricolage: French—the art of making do)—rightly, none of the chapters provide clear-cut answers since complex systems have boundable solutions. However, it offers strategies to consider and experiment with when next confronted with a real problem in ones workplace. Indeed the complexities of life require reflective and pragmatic “make do” solutions.

Joachim P. Sturmberg, MBBS, DORACOG, MFM, PhD,  
FRACGP,  
*Clinical A/Prof of General Practice,  
Monash University – Melbourne,  
and Conjoint A/Prof of General Practice, University of  
Newcastle – Newcastle, Australia,  
E-mail: [jp.sturmberg@gmail.com](mailto:jp.sturmberg@gmail.com)*